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(56) Documents Cited  
US 6092266 A US 6003646 A  
US 2288105 A

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ONLINE:WPI,EPODOC,JAPIO

(54) Abstract Title  
**Suitcase with a concealed zipper**

(57) A suitcase includes two housing halves (6) having outer peripheral portions (60) hinged together by connecting sections. A zipper unit (4) includes two interengaged zipper halves (41). A rubber strip unit includes two reinforcing rubber strips (3), each having an outer slot (32), within which the outer peripheral portion of a respective one of the housing halves (6) is stitched, and an inner slot (31), within which a respective one of the zipper halves (41) is stitched so as to conceal the zipper unit (4) within the rubber strips (3). A rubber cover (5) has a portion that covers outer surfaces of the connecting sections.

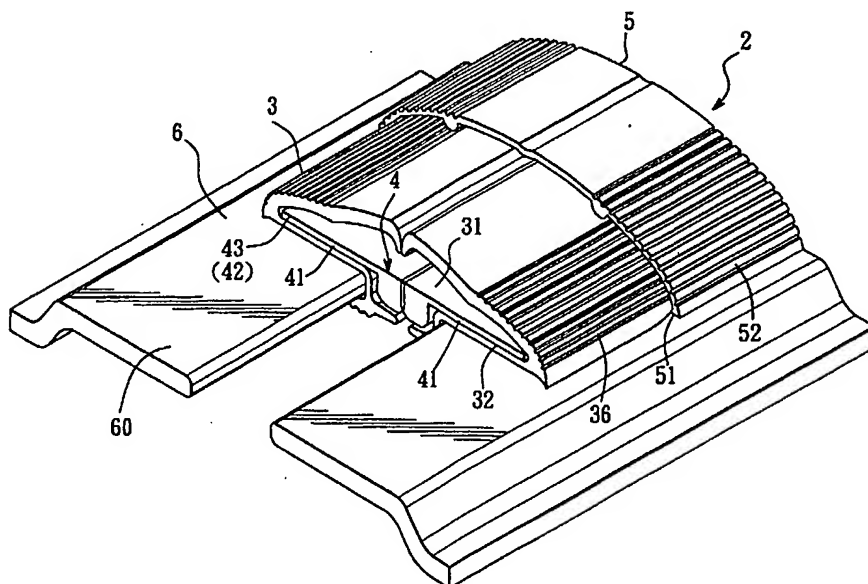


FIG. 4

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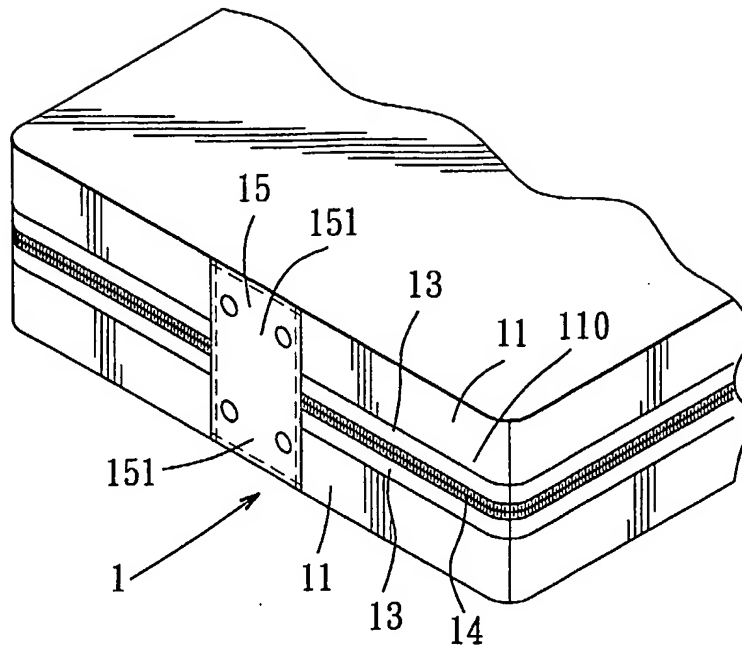


FIG. 1  
PRIOR ART

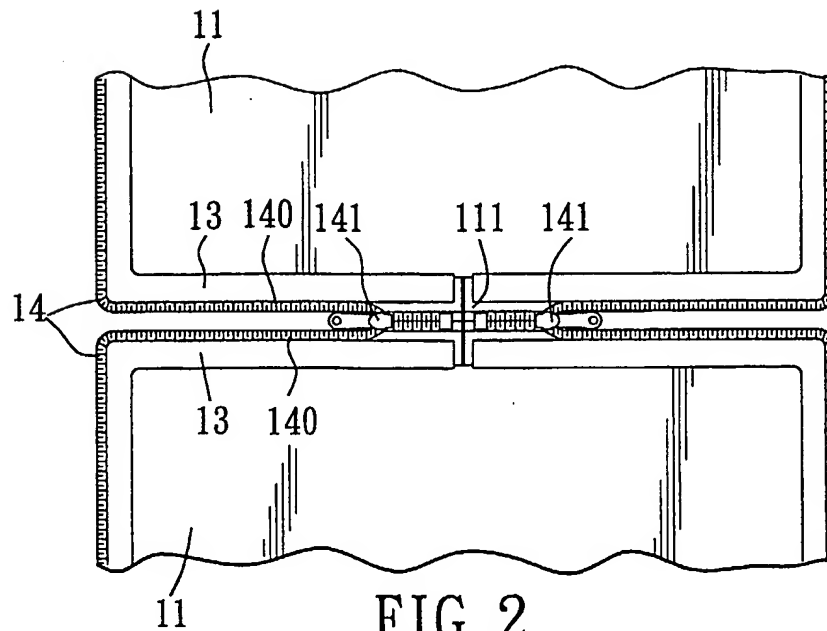


FIG. 2  
PRIOR ART

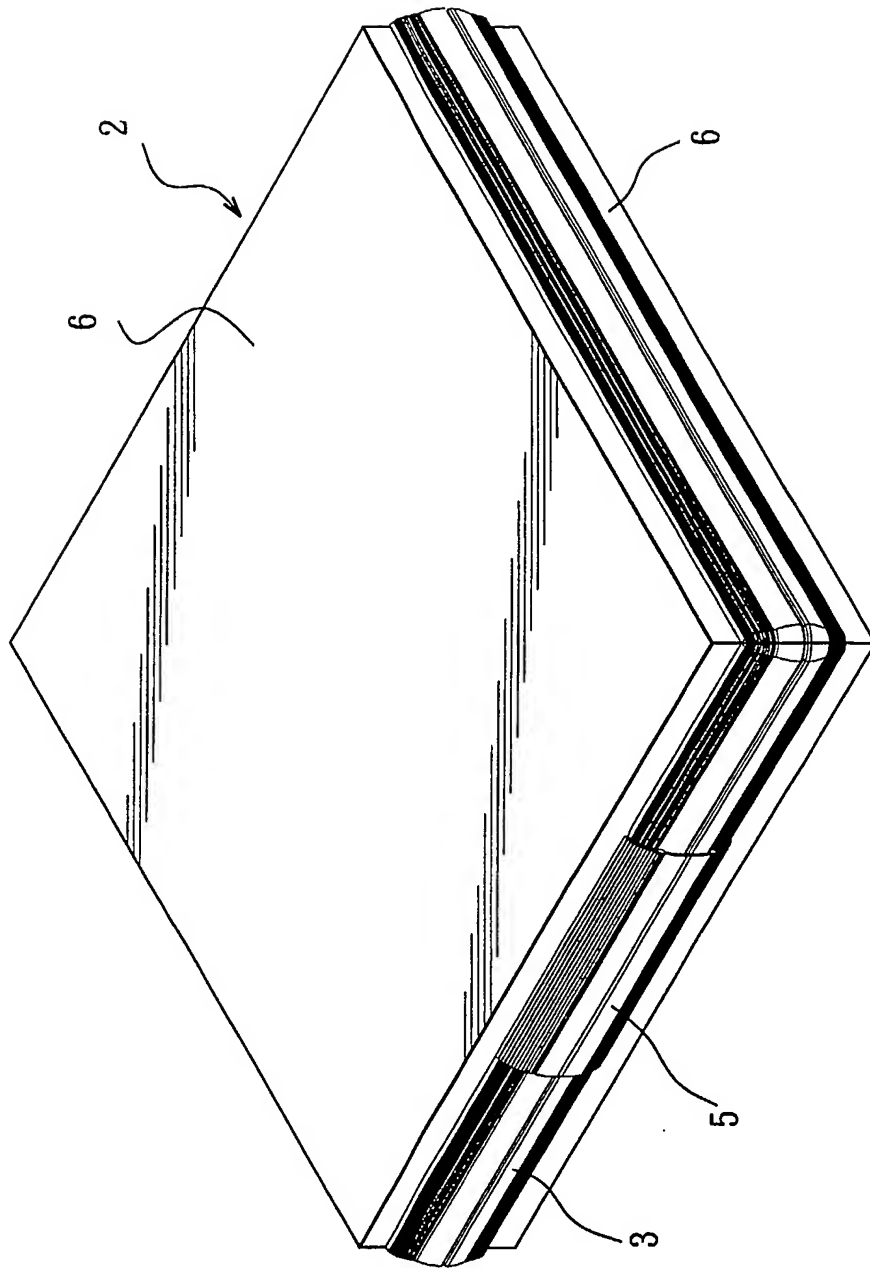


FIG. 3

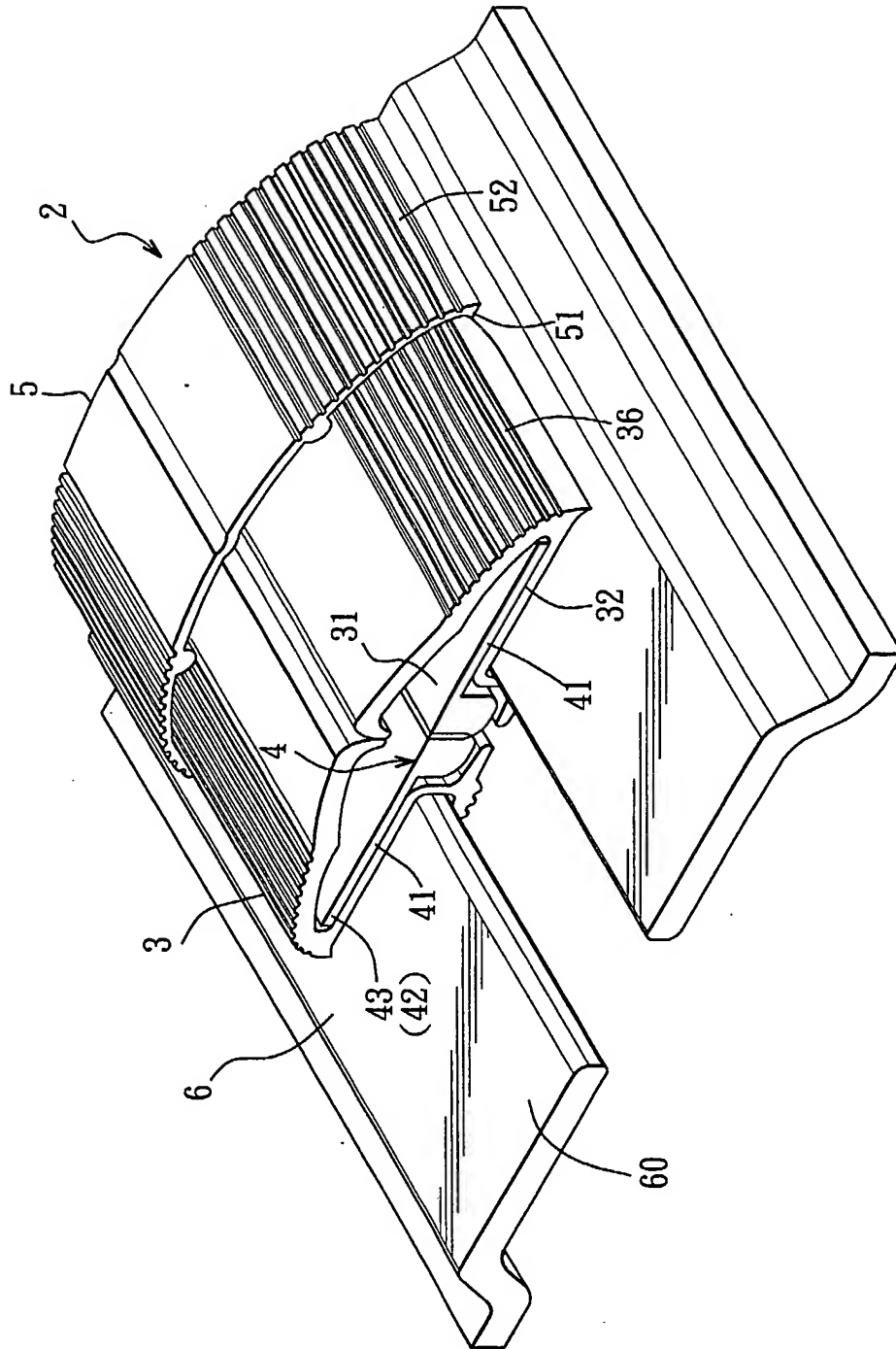


FIG. 4

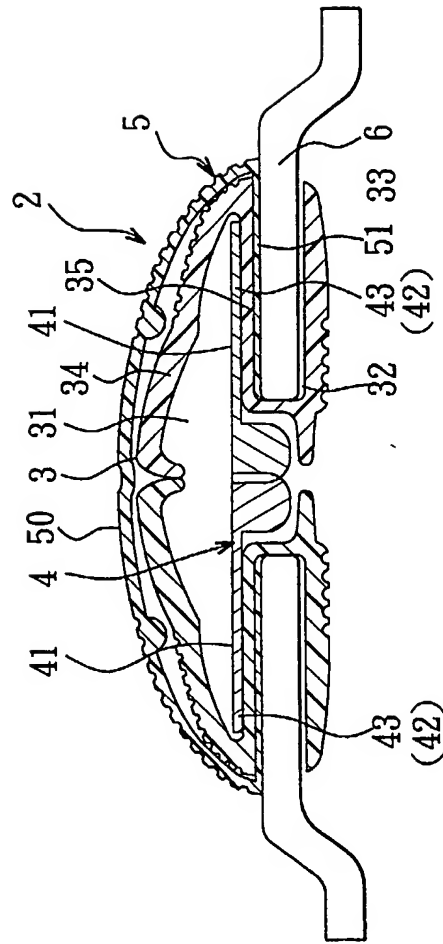


FIG. 5

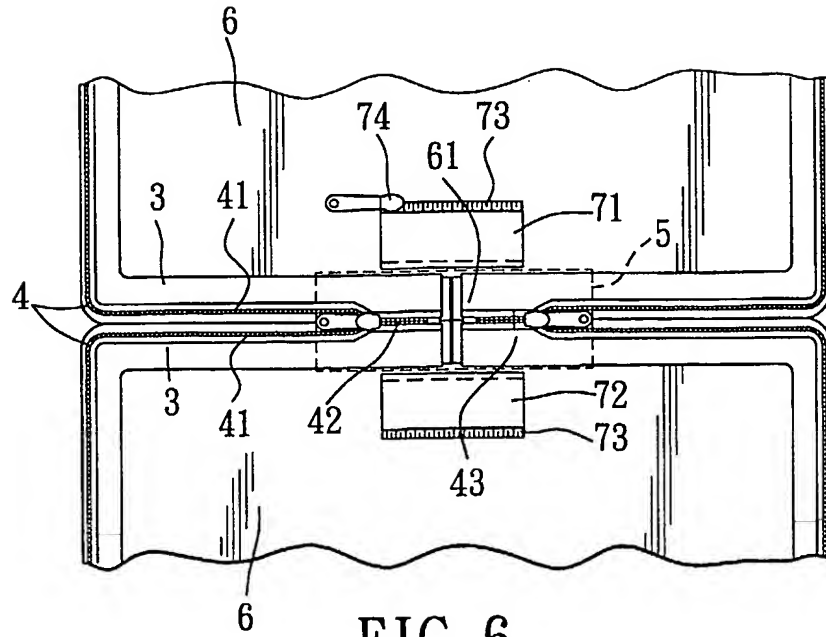


FIG. 6

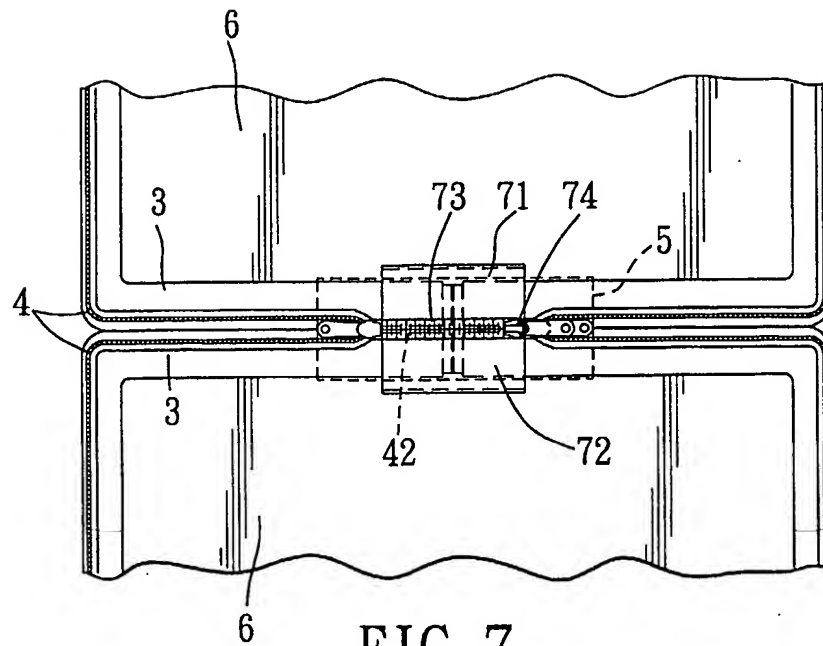


FIG. 7

**TITLE: SUITCASE WITH ZIPPER UNIT CONCEALED WITHIN AN  
ANNULAR RUBBER STRIP UNIT**

The invention relates to a suitcase, more particularly to a suitcase with a zipper unit concealed  
5 within an annular rubber strip unit.

Referring to Figures 1 and 2, a conventional suitcase 1 is shown to include two generally rectangular housing halves 11, a zipper unit 14, two elongated reinforcing rubber strips 13 and a  
10 decorative cover 15.

As illustrated, each of the housing halves 11 has an outer peripheral portion 110 with a connecting section 111. The connecting sections 111 are connected to each other so that the housing halves 11  
15 are rotatable about the connecting sections 111. Each of the connecting sections 111 has an inner surface and an outer surface. The zipper unit 4 includes two interengaged zipper halves 140, each of which has two ends that are fastened respectively to two opposite  
20 sides of the connecting sections 111 of the housing halves 11. Each of the reinforcing rubber strips 13 has two ends that are fastened respectively to two opposite sides of the connecting sections 111 of the housing halves 11 such that the rubber strips 13 extend  
25 along the entire length of the outer peripheral portions 110 except for the connecting sections 111 in such a manner that the zipper halves 140 and the

zipper heads 141 are exposed outwardly of the rubber strips 13. The decorative cover 15 is made from PVC material, and has an area greater than that of the connecting sections 111. Two opposite side portions 151 of the cover 15 are riveted respectively on the outer surfaces of the housing halves 11 so as to cover the connecting sections 111.

Some disadvantages resulting from the use of the conventional suitcase are as follows:

(1) The zipper halves 140 and the zipper heads 141 are not covered by the reinforcing strips 13, thereby affecting adversely the entire appearance of the conventional suitcase.

(2) The zipper halves 140 as well as the reinforcing rubber strips 13 may disengage from the outer peripheral portions 110 of the housing halves 11 due to accidental collision thereto or wearing and eventual rupturing of the stitches.

Therefore, the main object of this invention is to provide a suitcase with a zipper unit concealed within an annular rubber strip unit so as to avoid the aforesaid disadvantages resulting from the use of the conventional suitcase.

Accordingly, a suitcase of the present invention includes two generally rectangular housing halves, a zipper unit, and an annular rubber strip unit. Each of the housing halves has an outer peripheral portion



with a connecting section. The connecting sections are connected to each other so that the housing halves are rotatable about the connecting sections. Each of the connecting sections has an inner surface and an outer surface. The zipper unit includes two interengaged zipper halves, each of which has two ends that are fastened respectively to two opposite sides of the connecting sections. The rubber strip unit includes two elongated reinforcing rubber strips and an elongated rubber cover. Each of the reinforcing rubber strips has an outer side surface formed with an outer slot, within which the outer peripheral portion of a respective one of the housing halves is stitched except for a respective one of the connecting sections, and an inner side surface formed with an inner slot, within which a respective one of the zipper halves is stitched so as to conceal the zipper unit within the rubber strips. The rubber cover has a covering portion that covers outer surfaces of the connecting sections of the housing halves, and two connecting plate portions that are formed respectively and integrally with two opposite sides of the covering portion and that are stitched respectively within the outer slots in the rubber strips.

Other features and advantages of this invention will become more apparent in the following detailed description of a preferred embodiment of this

invention, with reference to the accompanying drawings,  
in which:

Figure 1 is a fragmentary and perspective view of  
a conventional suitcase;

5        Figure 2 illustrates how inner wall surfaces of two  
housing halves of the conventional suitcase are  
connected to each other;

Figure 3 is a perspective view of a preferred  
embodiment of a suitcase of the present invention;

10       Figure 4 is a fragmentary and perspective view of  
the preferred embodiment shown in Figure 3;

Figure 5 is a partly sectional view of the preferred  
embodiment, illustrating how two reinforcing rubber  
strips and a rubber cover are stitched on two housing  
halves of the preferred embodiment; and  
15

Figures 6 and 7 illustrate how two covering clothes  
are mounted on inner wall surfaces of the housing  
halves in the preferred embodiment.

Referring to Figures 3 to 6, the preferred  
embodiment of a suitcase 2 according to the present  
invention is shown to include two generally  
rectangular housing halves 6, a first zipper unit 4,  
and an annular rubber strip unit.  
20

As illustrated, each of the housing halves 6 has  
an outer peripheral portion 60 with a connecting  
section 61. The connecting sections 61 of the housing  
halves 6 are connected to each other so that the housing  
25

halves 6 are rotatable about the connecting sections 61. Each of the connecting sections 61 has an inner surface and an outer surface.

5 The first zipper unit 4 includes two interengaged first zipper halves 41, each of which has two opposite ends 42,43 that are fastened respectively to two opposite sides of the connecting sections 61 such that the first zipper halves 41 extend along the entire length of the outer peripheral portions 60 of the housing halves 6 except for the connecting sections 10 61.

The rubber strip unit includes two elongated reinforcing rubber strips 3 and an elongated rubber cover 5. Each of the reinforcing rubber strips 3 has 15 an outer side surface formed with an outer slot 32, within which the outer peripheral portion 60 of a respective one of the housing halves 6 is stitched except for a respective one of the connecting sections 61, and an inner side surface formed with an inner slot 20 31 within which a respective one of the first zipper halves 41 is stitched so as to conceal the first zipper unit 4 within the rubber strips 3.

The rubber cover 5 has a covering portion 50 that covers the outer surfaces of the connecting sections 25 61 of the housing halves 6, and two connecting plate portions 51 that are formed respectively and integrally with two opposite sides of the covering

portions 50 and that are stitched respectively within the outer slots 32 in the rubber strips 3. Each of the rubber strips 3 includes an elongated inner strip section 33, an elongated outer strip section 34 for covering a respective one of the first zipper halves 41, and a generally L-cross-sectioned connecting strip section 35 which interconnects the inner and outer strip sections 33, 34 in such a manner that a respective one of the inner slots 31 is defined between the outer strip section 34 and the connecting strip section 35, and that a respective one of the outer slots 32 is defined between the inner strip section 33 and the connecting strip section 35. The outer strip section 34 of the rubber strips 3 abut against each other. Two ends of each of the outer strip sections 34 of the rubber strips 3 are concealed within the cover 5. Each of the connecting plate portions 51 of the cover 5 is stitched and clamped between the connecting strip section 35 of a respective one of the rubber strips 3 and the outer peripheral portion 60 of a respective one of the housing halves 6.

Referring to Figures 6 and 7, two covering clothes 71 are stitched respectively on inner wall surfaces of the housing halves 6, and cover cooperatively the inner surfaces of the connecting sections 61 of the outer peripheral portions 60 of the housing halves 6. A second zipper unit 73 includes two interengaged

second zipper halves 74 that are fastened respectively to the clothes 71. Thus, the connecting sections 61 of the outer peripheral portions 60 of the housing halves 6 are concealed between the cover 5 and the clothes 71, as best shown in Figure 7. Preferably, the cover 5 and the outer strip sections 34 of the rubber strips 3 have outer surfaces which are formed with aligned ribs 52,53 (see Figure 4) that extend along the entire length thereof.

Some of the advantages provided by the suitcase of the present invention are as follows:

(1) The suitcase 2 of the present invention has an enhanced outer appearance when compared to the conventional suitcase 1, because the zipper unit 4 is concealed within the reinforcing rubber strips 3. In addition, the outer peripheral portions 60 of the housing halves 6 are strengthened, since the cover 5, the reinforcing strips 3 and the zipper unit 4 are stitched on the outer peripheral portions 60 of the housing halves 6.

(2) The cover 5 and the reinforcing rubber strips 3 cooperatively enhance the appearance of the suitcase 2 of the present invention because they are manufactured from the same material and are of the same design, such as aligned ribs 36,52 (see Figure 4) on the outer surfaces of the cover 5 and the rubber strips 3.

(3) The interior of the suitcase 2 is aesthetically enhanced due to the covering clothes 71 that cover the connecting sections 61 of the housing halves 6.

5 (4) Since the stitches fastening the zipper halves 41 and the outer peripheral portions 60 of the housing halves 6 are covered by the reinforcing rubber strips 3, accidental collision to the stitches that may result in disengagement between the outer peripheral portions 60 of the housing halves 6 and the zipper halves 41  
10 can be avoided. Thus, the service life of the suitcase of the present invention can be prolonged.

**CLAIMS:**

## 1. A suitcase comprising:

5 two generally rectangular housing halves (6),  
each of which has an outer peripheral portion (60)  
with a connecting section (61), the connecting  
sections (61) being connected to each other so that  
the housing halves (6) are rotatable about the  
connecting sections (61), each of the connecting  
sections (61) having an inner surface and an outer  
10 surface;

a first zipper unit (4) including two  
interengaged first zipper halves (41), each of which  
has two ends (42,43) that are fastened respectively  
to two opposite sides of the connecting sections  
15 (61); and

an annular rubber strip unit including  
two elongated reinforcing rubber strips (3),  
each of which has an outer side surface formed with  
an outer slot (32), within which the outer  
20 peripheral portion (60) of a respective one of the  
housing halves (6) is stitched except for a  
respective one of the connecting sections (61), and  
an inner side surface formed with an inner slot (31)  
within which a respective one of the first zipper  
25 halves (41) is stitched so as to conceal the first  
zipper unit (4) within the rubber strips (3), and  
an elongated rubber cover (5) having a

covering portion (50) that covers the outer surfaces of the connecting sections (61) of the housing halves (6), and two connecting plate portions (51) that are formed respectively and integrally with two opposite sides of the covering portions (50) and that are stitched respectively within the outer slots (32) in the rubber strips (3).

2. The suitcase as defined in Claim 1, wherein each of the rubber strips (3) includes an elongated inner strip section (33), an elongated outer strip section (34) for covering a respective one of the first zipper halves (41), and a generally L-cross-sectioned connecting strip section (35) which interconnects the inner and outer strip sections (33,34) in such a manner that a respective one of the inner slots (31) is defined between the outer strip section (34) and the connecting strip section (35) and that a respective one of the outer slots (32) is defined between the inner strip section (33) and the connecting strip section (35), the outer strip sections (34) of the rubber strips (3) abutting against each other, two ends of each of the outer strip sections (34) of the rubber strips (3) being concealed within the cover (5).

3. The suitcase as defined in Claim 2, wherein each of the connecting plate portions (51) of the cover (5) is stitched and clamped between the connecting



strip section (35) of a respective one of the rubber strips (3) and the outer peripheral portion (60) of a respective one of the housing halves (6).

4. The suitcase as defined in Claim 2, wherein each  
5 of the housing halves (6) has an inner wall surface, the suitcase further includes two covering clothes (71) which are stitched respectively on the inner wall surfaces of the housing halves (6) and which cover cooperatively the inner surfaces of the  
10 connecting sections (61) of the outer peripheral portions (60) of the housing halves (6), and a second zipper unit which includes two interengaged second zipper halves that are fastened respectively to the clothes (71), whereby, the connecting sections (61)  
15 of the outer peripheral portions (60) of the housing halves (6) are concealed between the cover (5) and the clothes (71).
5. The suitcase as defined in Claim 2, wherein the cover  
20 (5) and the outer strip sections (34) of the rubber strips (3) have outer surfaces which are formed with aligned ribs (52, 53) that extend along entire length thereof.
6. A suitcase substantially as hereinbefore described with reference to and as shown in Figures 3 to 7 of the accompanying drawings.



INVESTOR IN PEOPLE

Application No: GB 0105367.7  
Claims searched: 1 to 6

Examiner: Mike Henderson  
Date of search: 29 August 2001

## Patents Act 1977 Search Report under Section 17

### Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK CI (Ed.S): A4G B8P (PL6 PJ)

Int CI (Ed.7): A45C 5/00 13/00 13/10

Other: ONLINE:WPI,EPODOC,JAPIO

### Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	US 6092266 (LEE) (Figs 3 to 9 and corresponding description most relevant)	
A	US 6003646 (PAUDLER) (Figs 3 and 4 and corresponding description most relevant)	
A	US 2288105 (PLOTKIN) (Whole disclosure relevant)	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.